REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 44, 48, 50, 52, 55, 59, 61, 64, and 65 are canceled. Claims 42, 43, 45-47, 53, 54, 56-58, 60, and 63 have been amended. New claims 66-69 are added. The amendments have been drafted to clarify and emphasize patentable aspects of this invention. These amendments are supported for example by the original claims, application page 25, line 29 - page 26, line 3, page 27, line 3 *et seq.*, and page 32, line 29 to page 33, line 11. (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

The newly amended independent claims emphasize features wherein the radio bearer mapping information indicates information for each of a plurality of radio bearers, and a multiplexing step provides for simultaneous transmission of data from plural logical channels (on which the plural radio bearers are mapped respectively) via a single transport channel. The mapping step is clarified to emphasize that mapping of the radio bearers to the logical channels takes into account the radio bearer mapping information by assigning to a logical channel the priority and scheduling mode indicated in the radio bearer mapping information. The dependent claims have been amended to conform to the new wording of the independent claims.

The claims amendments are made in view of the comments in the Final Rejection and thus could not have been made earlier. Entry thereof under 37 CFR 1.116 is thus deemed to be warranted.

Claims 42, 43, 45, 47, 49, 53, 54, 56, 58, 60 and 63 stand rejected, under 35 USC § 102(e), as being anticipated by Cheng et al. (US 2004/0228313). Dependent claims 46 and 57 stand rejected, under 35 USC § 103(a), as being unpatentable over Cheng et al. (US 2004/0228313) in view of Choi et al. (US 2003/0185193). Dependent claims 51 and 62 stand rejected, under 35 USC § 103(a), as being unpatentable over Cheng et al. (US 2004/0228313) in view of 3GPP TR 25.896 V6.0.0 (2004-03). To the extent that these rejections may be applied to the amended and new claims presented herein, the Applicants respectfully traverse based on the points set forth below.

Cheng et al. relates to the mapping of data of logical channels to a transport channel for uplink data transmission in a communication system (see paragraph [0002]). In particular, the detailed description states that the invention is directed to a new MAC entity for enhanced uplink within a UMTS system by providing enhanced protocols at the Node B and the UE to support a new transport channel, i.e., an Enhanced Uplink Dedicated Channel, which is abbreviated EU-DCH within Cheng et al. (see paragraph [0021]).

The Final Rejection argues at page 2, last line through page 3, line 3 that the feature of establishing a radio bearer between the mobile terminal and a radio access network of the mobile communication system would be shown in Fig. 1 of Cheng et al. The Applicants respectfully disagree for the following reasons.

As mentioned in paragraph [0025], Fig. 1 of Cheng at al. illustrates a high-level diagram of the UMTS architecture. Concerning the air interface, it is only mentioned that the UTRAN interfaces over a Uu air interface with a radio interface part 101, namely, user equipments (UEs)

such as mobile stations. The Uu air interface is the radio interface between the UTRAN 150 and one or more UEs.

This teaching of Cheng et al. is silent with respect to any establishment of a radio bearer between a mobile terminal and a radio access network of the mobile communication system, much less the establishment of plural radio bearers as now recited in the Applicants' independent claims.

Thus, change et al. is deficient to provide a teaching of at least the above-noted feature of the Applicants' claims.

Concerning the feature of the independent claims directed to receiving at the mobile terminal a radio bearer mapping information from the radio access network, it is considered important to note that the radio bearer mapping information indicates for each of the radio bearers (1) a priority to be assigned to a logical channel to which the respective radio bearer is to be mapped and (2) a scheduling mode out of plural scheduling modes of the logical channel to which the respective radio bearer is to be mapped.

Paragraph [0012] of Cheng et al. cited by the Final Rejection at page 3, lines 5-14, states only that a (single) transmission parameter is extracted from a signaling message and that the transmission parameter may be at least one of (1) a priority indication parameter related to class priority of a service class of data to be transmitted on the uplink and (2) a radio channel condition. The transmission parameter of Cheng et al. is clearly different from what is signaled in the radio bearer mapping information of the Applicants' claimed invention. Furthermore, it is considered important to note that the information in the Applicants' claims indicate a scheduling

mode of a logical channel to which the radio bearer is mapped, whereas Cheng et al. provide a teaching relating to mapping of logical channels to transport channels.

Also, the teachings in paragraphs [0028] and [0029] of Cheng et al. do not go beyond what is taught in paragraph [0012] discussed above and therefore also fail to teach the feature of the Applicants' claims of receiving radio bearer mapping information and its content as recited in the claims.

In addition, it appears also important to note that indicating a scheduling mode (as in the Applicants' claims) and selecting a transmission mode for UL transmission based on a transmission parameter as in Cheng et al. (see paragraphs [0029] and [0051]) are not the same thing. With respect to the question of how the transmission mode is selected in Cheng et al., there are no details provided in the entire reference regarding how this selection of the transmission mode is performed.

Thus, it is submitted that Cheng et al. is deficient for this further reason.

Concerning the feature of the Applicants' claims directed to mapping a radio bearer to a logical channel at the mobile terminal based on the received radio bearer mapping information, it is apparent that Cheng et al. disclose no such feature. Furthermore, the amended claims now clarify that the mapping step includes assigning to a logical channel on which a respective radio bearer is mapped the priority and scheduling mode indicated in the radio bearer mapping information.

Although Cheng et al. does relate to the mapping of logical channels to transport channels (see paragraph [0035]), the reference is silent with respect to mapping of radio bearers to individual logical channels. The Final Rejection at page 3, last paragraph, incorrectly interprets

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paragraphs [0037] to [0041] of Cheng et al., as those sections discuss the MAC-c/sh entity and the MAC-d entity, which are not used for transmissions on the enhanced uplink (see paragraphs [0031] to [0033]).

The Final Rejection cites paragraph [0053] of Cheng et al. with respect to the feature of mapping a radio bearer to a logical channel at the mobile terminal based on the received information. However, paragraph [0053] appears not to be relevant, as it relates to the TFC selection function implemented in the user equipment. The TFC selection function however only selects a transport format combination out of the configured transport format combination set (or subset) for a transport channel, but is not related to the mapping of radio bearers to the logical channels.

Thus, the above-noted features are also not disclosed by Cheng et al. and further demonstrate the deficiencies of this reference.

Similarly, Cheng et al. also fails to teach the Applicants' claimed feature directed to multiplexing of data of the logical channels to a single transport channel for subsequent transmission. While paragraph [0035] of Cheng et al. teaches the multiplexing of logical channels to transport channels in general, Cheng does not teach that plural logical channels are multiplexed to a single transport channel.

Thus, Cheng et al. is deficient for this further reason.

The Applicants also note that the purpose and idea of Cheng et al. is also markedly different from the Applicants' claimed invention. The Applicants' claimed invention relates to deciding a scheduling mode for a respective radio bearer, respectively the logical channel to which it is mapped. Hence, in the Applicants' claimed invention, the radio access network

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decides which scheduling mode the mobile terminal has to use for which radio bearer, respectively logical channel to which the radio bearer is mapped (see the claim language "receiving at the mobile terminal radio bearer mapping information from the radio access network"). Thus, there is no flexibility for the mobile terminal to choose a scheduling mode. Furthermore, the Applicants' claimed invention facilitates that data of different logical channels having different scheduling modes may be multiplexed and sent in a single transmission of the mobile terminal.

On the other hand, in Cheng et al., the UE autonomously selects the transmission mode based on a transmission parameter (see paragraphs [0028], [0029], [0051]). For this purpose, the UE in Cheng et al. requires the "Autonomous/Scheduled mode Selector function 442" shown in Fig. 4, which (autonomously) manages the EU-DCH resources on uplink between an autonomous transmission mode and a scheduled transmission mode (see paragraph [0051]). From paragraph [0055], it is understood that this operation of the UE is intended to allow transmission of data having different priorities using different transmission modes, and to allow for changing the transmission mode between initial transmissions and retransmissions for "high data rate uplink data." Hence, Cheng et al, allows changing of the transmission mode for each transmission made by the UE, i.e., the transmission mode is set per UE (and not per radio bearer/logical channel).

For at least the above multiple reasons, the Applicants submit that Cheng et al. does not anticipate the Applicants' claimed subject matter.

The Final Rejection cites Choi et al. against dependent claims 46 and 57 for a teaching of setting priority for interrupted TB's to "0" by setting a flag to determine whether or not there are interrupted TB's, assigning priority to each logical channel, and selecting the TFC based on the

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flag and the priority assigned to the logical channel, arguing that it would have been obvious to include a flag setting as taught by Choi et al. The Final Rejection cites the 3GPP document against dependent claims 51 and 62 for a teaching of co-existence of different scheduling modes to provide flexibility in serving different traffic types. However, it is apparent that these alleged teachings do not cure the deficiencies of Cheng et al. with respect to the subject matter of the amended and new claims presented herein.

In view of the foregoing, it is submitted that independent claims 42, 53, 63, 68 and 69, and hence the claims dependent therefrom, are not anticipated by Cheng et al. and thus the 35 USC 102(b) rejection should be withdrawn. Further, all pending claims are deemed to be allowable over the individual or combined teachings of the applied references. Thus, a notice of allowance is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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